

April 3, 2002 Project No. 97664V3

PROVIDING

- Geotechnical Engineering
- Construction Materials
 Engineering
- Environmental Engineering
- Drilling
 Services

Mr. Todd Croft Nevada Division of Environmental Protection 1771 E. Flamingo Road, Suite 121-A Las Vegas, Nevada 89119

RE: Results of Monthly Surface Water Sampling of the Las Vegas Wash at the Northshore Road Bridge

Dear Mr. Croft:

Per your request, Geotechnical & Environmental Services, Inc. (GES) obtained a surface water sample from the Las Vegas Wash on March 26, 2002 near the Northshore Road Bridge. We sent this sample, under chain-of-custody protocol, to NEL Laboratories (NEL) for laboratory analysis of perchlorate. NEL reported a perchlorate concentration of 430 micrograms per Liter (μ g/L). The NEL report is included with this letter, along with Perchlorate Summary Tables for 2001 and 2002.

At the time of sampling, heavy construction equipment was observed moving soil within the Wash and along the banks of the Wash. Activity was observed for an approximate observed distance of one-quarter mile, both upstream and downstream of the North Shore Road Bridge. A temporary concrete mixing facility was erected approximately 100-feet from the Wash, an estimated distance of 200-feet downstream of the Bridge. Information obtained from a site worker regarding the observed activities indicates the work currently consists of installing a temporary pipeline (3 months timeframe) to divert the Wash so that dams can be constructed. Our normal sampling point (approximately 50-feet downstream of the Bridge) was not accessible, so sampling occurred approximately 400-feet upstream from the Bridge. No construction activity was observed during the previous sampling event.

Our services were performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable engineering firms in this or similar localities. No other warranty, either express or implied, is included or intended in this report.

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We appreciate this opportunity to provide our services. If you have any questions regarding these results, please feel free to call us at 365-1001.

Sincerely,

Geotechnical & Environmental Services, Inc.

Richard Cooke Staff Geologist

Rich and Corole

Daniel C. Burns, C.E.M.* #1692 (Expires 10/07/2003) Project Manager

*"I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances."

mam

Enc:

2001 & 2002 Perchlorate Summary Tables

NEL Analytical Report

Dist:

1 original mailed to addressee

1 faxed to addressee at 486-2863

1 faxed to Jeff Gibson, American Pacific Corporation

1 copy mailed to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, CA 94105

1 copy to project file 97664V3

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Las Vegas Wash at Northshore Road Bridge 2001 Summary of Perchlorate Concentrations

DATE SAMPLED	PERCHLORATE (μg/L)
1/25/01	280
2/27/01	350
3/27/01	480
4/26/01	320
5/29/01	240
6/27/01	400
7/25/01	550
8/27/01	420
9/27/01	460
10/25/01	420
11/27/01	810
12/27/01	440

Las Vegas Wash at Northshore Road Bridge 2002 Summary of Perchlorate Concentrations

DATE SAMPLED	PERCHLORATE (μg/L)
1/29/02	510
2/26/02	470
3/26/02	430

NEL LABORATORIES

Reno • Las Vegas Phoenix • Boise



Daniel Burns Geotechnical & Environmental Services, Inc. 7150 Placid Steet Las Vegas, NV 89119

TEL: 702-365-1001

RE Project: FPF

Order No.: L0203343

Dear Daniel Burns:

NEL Laboratories, Las Vegas received 1 sample on 3/26/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Stan Van Wagenen

Laboratory Manager

D

Certifications: Reno Las Vegas Arizona AZ0520 AZ0518 California 1707 2002 Idaho Certified Certified Montana Certified Certified Nevada NV033 NV052 New Mexico Certified Certified US Army Corps of Engineers Certified

CLIENT:

Geotechnical & Environmental Services, In

CLIENT ID:

North Shore Road Bridge

PROJECT ID:

FPF

DATE SAMPLED: 3/26/02

PROJECT #:

97664V3

NEL SAMPLE 10: L0203343-001A

MATRIX:

AQUEOUS

			Reporting					
Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Perchlorate	430	μg/L	40	10	EPA 314	03/29/02	03/29/02	SAM-Reno

S - Spike Recovery outside accepted recovery limits

NEL LABORATORIES

Geotechnical & Environmental Services, In CLIENT:

L0203343 Work Order:

Project:

ANALYTICAL QC SUMMARY REPORT

%RPD RPDLimit Run ID: SUB-1045 SeqNo: 12492 Test Method: EPA 314 LowLimit HighLimit RPD Ref Val Prep Date: 3/29/02 Analysis Date: 3/29/02 %REC PERCHLORAT TestCode: PERCHLORA Units: pg/L SPK Ref Val SPK value TestNo: EPA314 PQL Batch ID: R_R1045 Result SampType: MBLK FPF Sample ID: MB-R1045

4.0

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Perchlorate

Amalyte

B - Analyte detected in the associated Method Blank

C - Unspiked sample >5 times the amount spiked R - RPD outside accepted recovery limits

J - This concentration is considered an estimate due to LCS failure.

JI - MS or MSD outside accepance limits. LCS acceptable.

ND - Not Detected at the Reporting Limit

Qualifiers:

Page I of I Date: 01-Apr-02

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Heno • Las vegas • Boise Phoenix • Sacramento	Project Name:	70	Project N	Project Number: 9764 US	3
Las Vegas Division • 4208 Arcata Way, Suite A • Las Vegas, Nevada 89030	Purchase Order Number:	ber:	Sampled By:	3. R. Gole	
Company GES Address: 7150 Placed St., Las Vegus, NV 89119 Prove Number: 7503365-1001 Stilling Address: Expected During	&I'S	Analysis			
5-day 2-day 1-day N.E. Omer Sample Identification Identification Identification	# of Contains (Box Preservative	Policy of the state of the stat			Remarks .
09.15 /3/26/02 North, shore Road Bridge O	1 Kg & X				
Custody Seal intact? Y N None Termp. Condition when received good		Box #1 DW - Dentis WW - Wasts OL - Oulong	DW - Denking Water SD - Solid WW - Yrasts Water AO - Aqueous DL - Od/Organic Liquid A - Air	Box #2 A. HCI B. HKQ, C. H.SQ, C. NeOH	E los Chiy F. Other G. Not Preserved
Reinquished by (Print) (Signature)	Date/Time	Received by (Print)	(Sign	(Signature)	Date/Time
"Richam Gooks Die Land Comba 7/2	1/20/20-5	DANIEL BURNS	Burn ()	18ms 3/24/02	3/24/02 1100
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The liebity of NEL Laboratories Inc. is limited strictly to the price of sample analysis for those samples received in good condition. NEL is not responsible for loss, damage, resampling costs and/or qualified data related to samples not received in good condition.

The liebity of NEL Laboratories in limited strictly to the price of sample social times are measured. Signature also constitutes acceptance of NEL Winaround times are measured in regular working days. Samples received at the time of sample received. NEL furnaround times are measured in regular working days. Samples received at the laboratory after 15:30 will be considered received on the next working day. Commitment of laboratory to the requested received on the next working day. Commitment of laboratory to the requested to the next working day. Commitment of laboratory after the laboratory and laboratory and laboratory after the laboratory and laboratory and laboratory after

LETTER OF TRANSMITTAL

GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

7150 Placid Street Las Vegas, Nevada 89119 (702) 365-1001 (702) 341-7120 (FAX)

TO:	NDEP)ate:	April 3,	2002
	1771 E Flamingo Road,	Ste 121A	PROJI	ECT: Las V	/egas Wash @	Northshore Bridge
	Las Vegas, Nevada 8911	9				73.4 + 2 - 3
ATTN:	Mr. Todd Croft	i	GES PROJEC	T #	9766	4V3
						*** *** ***
WE ARI	E FORWARDING THE ITEM	S LISTED BELO	OW VIA:			
	MESSENGER	PICK UP	x	U.S. MAIL		"NEXT DAY"
COPIES	DESCRIPTION					
1	Results of Monthly S	Surface Water S	Sampling of	the Las Vega	as Wash at the	Northshore
	Road Bridge					

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THESE	ITEMS ARE SENT FOR:	REVIEW	COM	IMENT	APPROVAL	USE
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REMAR	KS:					. • •
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THIS M		Daniel C. Burns		DV OF TOAL	LODAITT A L	
	PLEASE S	IGN AND RETU	JRN ONE CO	PY OF TRAI	NSMITTAL.	\$
RECEIV	'ED BY:	TIME			DATE:	
	DISTRIBUTION: mailed to Kevin Mayer @ U	JSEPA SFD 72				
						

If enclosures are not as noted, please notify us at once.